

Claims

1. A hermetically sealed, optical fiber assembly, comprising:

    a plurality of optical fibers;

    a ferrule having a first aperture extending through a first end of the ferrule and a plurality of second apertures extending through a second end of ferrule opposing the first end of the ferrule such that a continuous passage is formed between the first aperture and each of the second apertures, said first aperture having a diameter greater than a diameter of the second apertures and being sufficiently large in size to receive the plurality of optical fibers therein, each of said optical fibers traversing the first aperture and a respective one of the second apertures;

    an adhesive material securing each of the optical fibers to the first aperture and to said respective one of the second apertures; and

    a solder material bonding each of said optical fibers to an entrance to said respective one of the second apertures.

2. The optical fiber assembly of claim 1 wherein said adhesive material substantially fills said first aperture.

3. A method of forming a hermetically sealed, optical fiber assembly, said method comprising the steps of:

    providing a ferrule having a first aperture extending through a first end of the ferrule and a plurality of second apertures extending through a second end of ferrule opposing the first end of the ferrule such that a continuous passage is formed between the first aperture and each of the second apertures, said first aperture having a diameter greater than a diameter of the second apertures;

    inserting a plurality of optical fibers into the ferrule such that the plurality of optical fibers traverses said first aperture and each of the optical fibers traverse a respective one of the second apertures;

    applying an adhesive material between each of the optical fibers and the first aperture;

applying an adhesive material between each of the optical fibers and said respective one of the second apertures; and

applying a solder material to bond each of the optical fibers to an entrance to said respective one of the second apertures.

4. The method of claim 3 further comprising the step of substantially filling said first aperture with the adhesive material.

5. The method of claim 3 wherein the step of applying a solder material includes the step of removing a portion of a sheath surrounding each of the optical fibers and applying a metallic coating to each exposed portion of the optical fibers.